

# Air- Conditioning and Refrigeration Worker

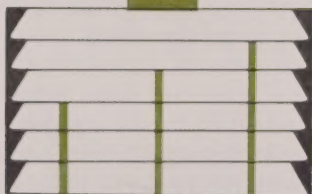
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Ministry of Colleges & Universities  
Apprenticeship Training

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Rapid expansion of the air-conditioning and refrigeration industry in Ontario is creating a "new world" of interesting and challenging job opportunities for trained and capable men.

Apprenticeship training in this highly technical trade is available under the modernized industrial training program sponsored by the Ministry of Colleges and Universities.

During the life of the contract the apprentice works under the supervision of skilled and experienced journeymen to acquire the skills required to install, maintain and repair cooling systems in homes, offices, industrial plants and scores of other buildings.

### Qualifications

Applicants for apprenticeship must be 16 years or over, and have a minimum of Grade 10 standing in an Ontario secondary school or an equivalent level of education. There are no maximum age limits for apprentices, but they should have an interest in mathematics, physics, electricity and blue print reading.

### Duties

Air-conditioning and refrigeration workers are required to perform a wide range of duties including:

- installation, maintenance, servicing and repairing equipment in refrigeration plants and cooling systems;
- trouble-shooting, accurate diagnosis and corrective action in overhauling, reconditioning or repairing integral parts of refrigeration or year-round air-conditioning (heating and cooling) systems such as pumps, compressors, piping, wiring, panels and other electrical equipment, along with air, water flow and temperature controls;
- using the necessary hand tools to perform such operations as soldering, welding or brazing;
- using precision instruments to test and analyze systems for proper performance.

### Training

Apprenticeship training for air-conditioning and refrigeration tradesmen covers five periods of 1,800 hours each (equivalent to approximately 4½ years), consisting of practical on-the-job training and related instruction at a College of Applied Arts and Technology.

The related courses of instruction at a College are compulsory, and include an eight-week basic course, an intermediate course of seven weeks and seven weeks of advanced instruction near the end of the apprenticeship contract.

## **Training Allowance**

During in-school instruction, the apprentice's tuition fees, living allowance and travel expenses are provided by the Federal Department of Manpower and Immigration and the Ministry of Colleges and Universities, under a shared-cost agreement.

## **Earning While Learning**

While training on the job, apprentices earn while they learn. Their wages are based on a percentage of those paid to journeymen in the same trade in the same shop. During the first year, they receive 40 per cent of the journeyman's rate, which increases to 50, 60, 70 and 80 per cent in each of the four subsequent periods.

At the conclusion of each period, apprentices must receive the recommendation of their employer before proceeding to the next period of the contract.

## **Certificates of Apprenticeship**

On completion of the five periods, apprentices must write a final examination. A mark of 60 per cent will entitle them to a Certificate of Apprenticeship. Apprentices obtaining a mark of 70 per cent or more will receive an inter-provincial Seal permitting them to practice in their trade in most of Canada's provinces.

A certificate of Qualification issued by the Ministry of Colleges and Universities is necessary for workers in this trade. It is issued by the Ministry on payment of a \$10 fee, and must be renewed every second year on the birth date.

## **Employment Prospects**

The employment outlook for air-conditioning and refrigeration mechanics is excellent.

The number of homes with central air-conditioning is expected to rise rapidly during the next decade. In addition, use of central air-conditioning in offices, stores, schools and other buildings is expected to continue to increase.

Employment opportunities will occur in the areas of residential, commercial and industrial construction, transportation, food services, manufacturing, institutional and frozen foods.

## **Enquiries**

All enquiries concerning apprenticeship should be addressed to the Director of Industrial Training or to the district offices across the Province, listed on the back of this leaflet.

INDUSTRIAL TRAINING BRANCH

**District Offices  
Industrial Training Branch**

Barrie 728-3727	North Bay 474-5509
Belleville 968-8671	Ottawa 731-2556
Brantford 756-5197	Owen Sound 376-5790
Brockville 342-5033	Pembroke 732-9994
Callandar 752-1231	Peterborough 743-4172
Chatham 352-2800	St. Catharines 682-4313
Cornwall 933-4260	Sarnia 337-2165
Fort Erie 871-7621	Sault Ste. Marie 949-3331
Guelph 821-3770	Stratford 273-1520
Hamilton 527-2951	Sudbury 566-3071
Kenora 468-6167	Thunder Bay 345-2101
Kingston 542-2853	Timmins 267-2420
Kitchener 744-5211	Toronto 965-4211
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